Library Online “elibrary.edyu”

**Software Requirements Specification**

Version 1.0



**Group Id: F210273AE8**

**Supervisor Name: Abdul Majid Khokhar (abdulmajid@vu.edu.pk)**

**Revision History**

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| --- | --- | --- | --- |
| **Date (dd/mm/yyyy)** | **Version** | **Description** | **Author** |
| 17-Dec-2021 | 1.0 | E-Library is a digital library website, where user can find books according to their needs by using filters and easily read books. E-Library maintain the information about the books, their authors, members of library which is very complex to maintain the information manually. E-library helps in many instance of maintenance. It will reduce the manual workload. | BC180408671,  BC180203457 |

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**SRS Document**

**Scope of Project:**

During these days visiting a library is such a hardy task and people don’t want to go there and spend their specious time. They just want to stay in their comfort zone and there they want to access of everything. To mitigate the issues of conventional and manual method of reservation and distribution of books to readers from library, E-Library Management System has been created. E-Library is completely new library management system.

E-Library is web-based online library website which is maintain by librarian/Admin. He/she will upload books and maintain the information about author, category, and date of publish. Student/User will easily search books and read books online or even download books. They will search books according to their desires by using filters. With this computerized system there will be no loss of book record or member record which generally happens when a non-computerized system is used. Student will reads books where they left. This E-Library will help them in their study and also save their valuable time.

**Functional and non Functional Requirements:**

**Functional Requirement:**

**Visitor:**

Requirement:

* Can preview books and see detail about name, author, date of publish, category, edition, publisher of book.
* Can’t read book without registration.
* Register himself/herself by filling registration form.
* User search feature to find books.
* Can view categories of books.
* Can login after registration.
* Login using email and password after registration

**Reader:**

Requirement:

* Can login by providing email and password.
* Can add/remove books to/from personal bookshelf.
* Can searching different books using different filter.
* Can view book shelf.
* Can reading books from where they left.
* Update password.
* Can logout.

**Administration:**

Requirement:

* Can access admin portal by login authentication.
* Add/Remove/Edit books to the database.
* Add/Delete/Update categories.
* View available book list.
* View readers of website.
* Update password.
* Manage readers.

**System:**

Requirements:

* Nobody can read books without login.
* Nobody can login before registration.
* No one can view can access reader portal without login.
* Searching feature based on different filters.
* Categories are available to everyone.
* At least contain 3 books in each category.
* Proper validation of different forms.
* No one can access admin portal without login authentication.
* Only register user can read and download books.

**Non-Functional Requirement:**

* **Efficiency**

User easily access searching and load books at fast speed. Books are available on index page.

* **Reliability**

The system should accurately performs member registration, member validation, report generation, and search.

* **Usability**

The system is designed for a user friendly environment so that student and staff of library can perform the various tasks easily and in an effective way.

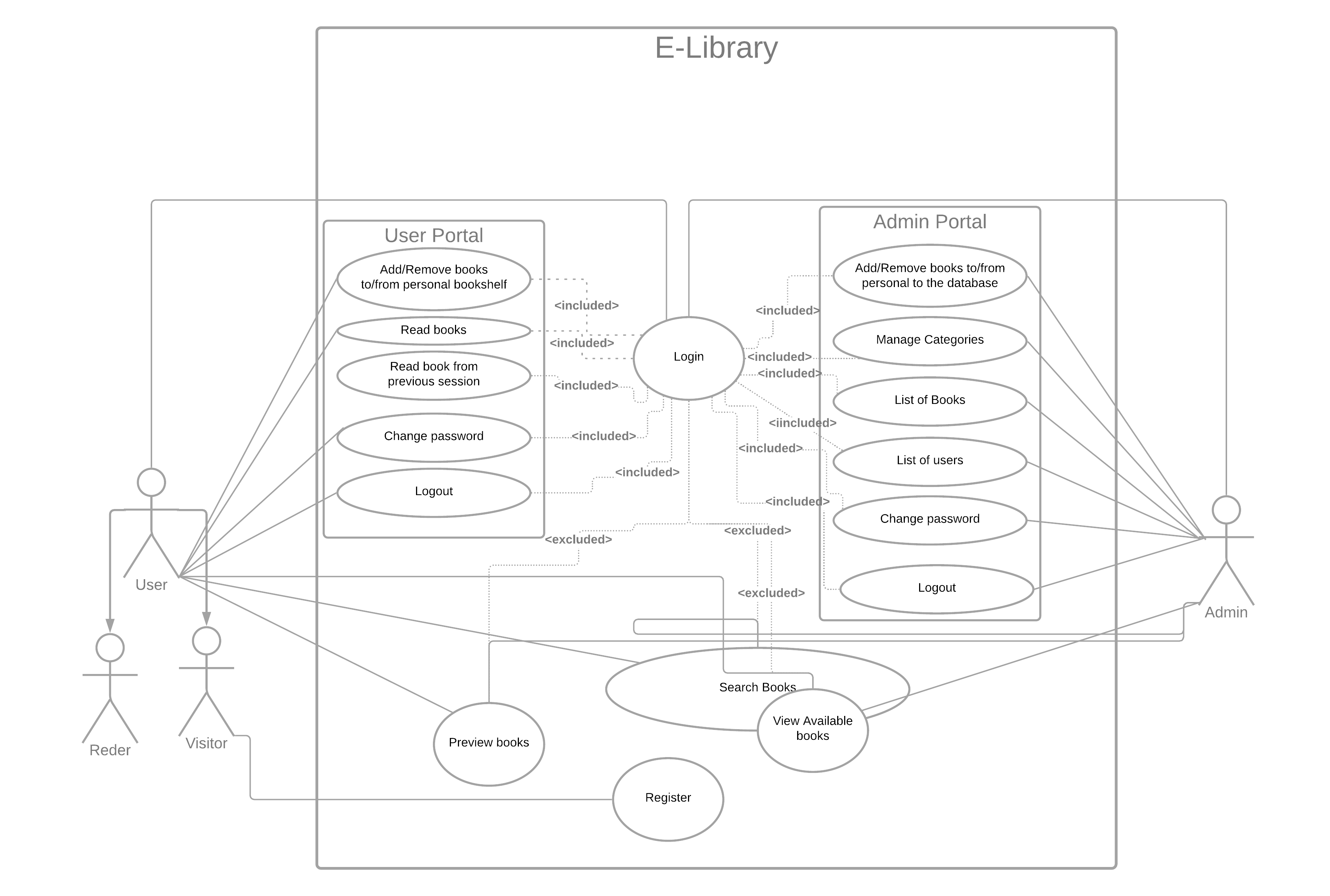
* **Security:**

System must be secure, no one can access authenticate pages without proper login.

* **Lifecycle**:

System must be design in such way that enhancement in future would be implemented easily.

**Use Case Diagram(s):**



**Usage Scenarios:**

|  |  |
| --- | --- |
| Use Case Title | Registration |
| Use Case Id | ELUS-1 |
| Users | Visitor |
| Actions | Visitor will open the application. Fill the registration from. |
| Description | Visitor open application there he find login link. If he was not registered yet there will be an option to create an account. He will access that registration page and by providing required information he will register himself. |
| Pre-Condition | Application is available, Internet is available, must not be a user with same email, registration page is accessible. |
| Post-Condition | Checking of provided information of user if all correct then return message or confirmation message to user. |
| Exception | Server response, provided email id must not be registered already. |

|  |  |
| --- | --- |
| Use Case Title | Login |
| Use Case Id | ELUS-2 |
| Users | Reader/Visitor, Admin |
| Actions | Visitor will open the application. Access login page and login by email id and password. |
| Description | After open the application user access the login page. User or admin login himself by providing email and password to access user and admin portal respectively. |
| Pre-Condition | User must be registered into application before login. |
| Post-Condition | Return message or confirmation message. If user/admin login successfully then user/admin portal provided to them. |
| Exception | Email and Password must be matched to existing user. |

|  |  |
| --- | --- |
| Use Case Title | Admin Portal |
| Use Case Id | ELUS-3 |
| Users | Admin |
| Actions | Add/update/delete books, manage/add/delete/update categories, view available books in the database, view users of the application, change password, logout himself. |
| Description | After valid login authentication admin portal will be provided to the admin. Now he can view the user of his E-Library by clicking user’s button. He can view available books in library by clicking book’s button. Here he will all the books in the database with edit and delete button for editing and deleting any book. There will be add button to add more books to the database. When he click add button add book form will be appear and by fill all the required details he will new book to the database. He can also manage categories by clicking categories tab. On clicking all the categories available in database will be shown to him. He will edited, delete or add more categories by providing necessary details. He would change his password by clicking change password tab. On clicking, change password form will be shown to him. By providing current password, new password and confirmation password he will change his password if all the information provided correctly. He would logout himself by clicking logout button. |
| Pre-Condition | Admin must be logged in. |
| Post-Condition | Confirmation message for each action in admin portal. When admin logout from portal must turn to login page. |
| Exception | Login must be authenticated. Only show admin portal of the admin is logged in. |

|  |  |
| --- | --- |
| Use Case Title | User/Reader Portal |
| Use Case Id | ELUS-4 |
| Users | User/Reader |
| Actions | Add/remove books to personal bookshelf, view available books in the database, preview books where he left books, change password, logout himself. |
| Description | After valid login user/reader portal will be provided him. Here he will explore different options. He will add available books to his personal bookshelf. In personal bookshelf interface he will be able to remove book. He will be able to explore available books in the database. He would be able to preview the books where he left before. He would change his password by clicking change password tab. On clicking, change password form will be shown to him. By providing current password, new password and confirmation password he will change his password if all the information provided correctly. He would logout himself by clicking logout button. |
| Pre-Condition | User must be register and must be login. |
| Post-Condition | Confirmation message for each action in user portal. When user logout from portal must turn to login page. |
| Exception | Proper authentication, User portal only shown when user logged in. |

|  |  |
| --- | --- |
| Use Case Title | Searching Books |
| Use Case Id | ELUS-5 |
| Users | Visitor/Reader, Admin, |
| Actions | Enter keyword and select particular filter. |
| Description | Search box is available for everyone. Anyone can enter key words related to book and select filter to search book on particular criteria. |
| Pre-Condition | Key word must be enter for searching. |
| Post-Condition | Return books to the visitor which meet the given criteria. Return proper message and none of book meet the criteria |
| Exception | Key word must be enter. |

**Adopted Methodology**

Our methodology for this project is VU process model which is basically a combination of Waterfall and Spiral model. Methodology in its simple mining is the approach to complete project. As we already that out project is divided into different phases as in waterfall so VU Process model is consider to be completed in generic sequence. The different phases of VU process model are.

Requirement Analysis:

It is phase all the requirement regarded to the system that is going to be developed is gathered. In this phase we consider what the system going to do and what the services, constraint and goals are accomplished by user, and how it behaves in different scenarios. All these information are documented in System Requirement Specification (SRS).

Design Phase:

In this phase design of the system is address with the help of ERD’s, Use cases, and database design and interface design. This phase also help to specify software and hardware requirement. All these information in VU process model are gather in design document.

Implementation:

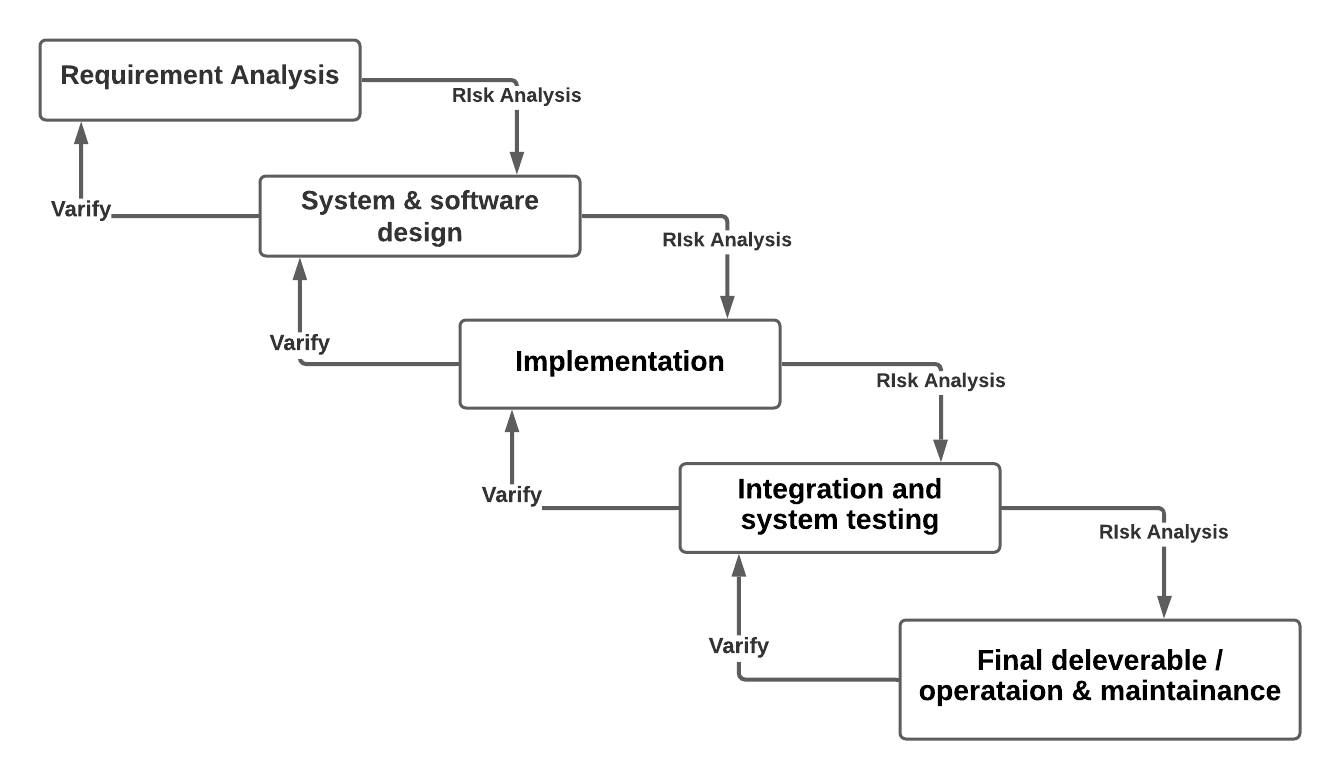
This is consider to an important phase all the coding will done in this phase.

Testing Phase:

All the system will be test before going to submission phase.

Final Deliverable:

After the completion of the project. Project source code, presentation of the project, and project report will be submitted.



**Work Plan (Use MS Project to create Schedule/Work Plan)**

<Provide Gantt chart of your final project>